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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,522	02/08/2001	Chris O'Rourke	062891.0523	2665

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Barton E. Showalter
Baker Botts L.L.P.
Suite 600
2001 Ross Avenue
Dallas, TX 75201-2980

EXAMINER
SHINGLES, KRISTIE D

ART UNIT	PAPER NUMBER
2141	

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/781,522	O'ROURKE ET AL.
	Examiner	Art Unit
	Kristie Shingles	2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.
2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-20_ is/are pending in the application.
    4a) Of the above claim(s) _2-8 and 12-18_ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1,9-11,19 and 20_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☒ Claim(s) _2-9 and 11-18_ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _08 February 2001_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-20 are pending.

Priority

1.   Applicant has complied with the conditions for receiving the domestic priority benefit of

an earlier filing date under 35 U.S.C. 120 from Application No. 09/751,317, filed on 12/29/2000.

Information Disclosure Statement

2.   The information disclosure statement (IDS) submitted on 02/08/2001 is in compliance

with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being

considered by the Office. An initialed and dated copy of Applicant's IDS form 1449 is attached

to the instant Office action.

Drawings

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they

include the following reference character(s) not mentioned in the description: 18 of Fig.1 and

600 of Fig.6.

Corrected drawing sheets, or amendment to the specification to add the reference

character(s) in the description, are required in reply to the Office action to avoid abandonment of

the application. Any amended replacement-drawing sheet should include all of the figures

appearing on the immediate prior version of the sheet, even if only one figure is being amended.

The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37

CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not

accepted by the examiner, the applicant will be notified and informed of any required corrective

action in the next Office action. The objection to the drawings will not be held in abeyance.

Species

4.   Applicant is required under 35 U.S.C 121 to elect a single disclosed species for

prosecution on the merits to which the claims shall be restricted if no generic claim is finally

held to be allowable. Currently in the instant application, Group I contains species 2-9 with

claim 1 as the generic claim and Group II contains sub-species 11-18 with claim 9 as the generic

claim.

   a.   Group I contains claims directed to the following patentably distinct species of the

claimed invention:

   - Species 1:   claim 2.

   - Species 2:   claim 3.

   - Species 3:   claim 4.

   - Species 4:   claim 5.

   - Species 5:   claim 6.

   - Species 6:   claim 7.

   - Species 7:   claim 8.

- Species 8:   claim 9.

b.   Group II contains claims directed to the following patentably distinct species of

the claimed invention:

- Sub-Species 1:   claim 11.

- Sub-Species 2:   claim 12.

- Sub-Species 3:   claim 13.

- Sub-Species 4:   claim 14.

- Sub-Species 5:   claim 15.

- Sub-Species 6:   claim 16.

- Sub-Species 7:   claim 17.

- Sub-Species 8:   claim 18.

Restriction election

5.   The Office acknowledges the receipt of Applicant's restriction election, discussed over

the telephone with Atty. Tod Casen on 06/23/2004 and 07/07/2004.   Applicant elects with

traverse claim 9 from Group 1 (claims 2-9) and claim 11 from Group 2 (claims 11-18). Hence,

claims 1, 9, 10, 11, 19, and 20 are pending and will be examined in the instant application.

Claims 2-8 and 12-18 are nonelected and therefore will not be examined.

Double patenting

6.   The nonstatutory double patenting rejection is based on a judicially created doctrine
grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or
improper timewise extension of the "right to exclude" granted by a patent and to prevent possible
harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.

Cir. 1993); *In re Longi,* 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum,* 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel,* 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7.   Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-

type double patenting as being unpatentable over claims 10-12 of copending Application No.

09/780,755. Although the conflicting claims are not identical, they are not patentably distinct

from each other because claims are significantly equivalent save for the following differences:

mention of control block, extended feature of subpool with "header" and "pointer", extended

uses of connection block for "server load balancing" and "free or allocated" feature.

This is a provisional obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

8.   A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.,* 151 U.S. 186 (1894); *In re Ockert,* 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel,* 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

9.   Claims 9 and 19-20 are provisionally rejected under 35 U.S.C. 101 as claiming the same

invention as that of claims 9 and 13-14, respectively of copending Application No. 09/780,755.

a.   Per claim 9, both applications disclose: a system as in claim 1, wherein said control block has an interval list address.

b.   Per claim 19, claim 13 of the copending application identically discloses: a method of allocating memory for a client network address translation (NAT) pool, said method comprising the steps of: creating an internal control block that represents said client NAT address range; creating a main pool header; allocating at least one subpool header having a subpool memory block containing one or more fixed-length connection blocks that are allocated within said subpool memory block, said connection blocks containing client NAT addresses, said subpool header being referenced by said main pool header; wherein said client NAT address ranges remain allocated within said subpool memory until the entire subpool is freed.

c.   Per claim 20, claim 14 of the copending application identically discloses in the form of means-plus-function limitations in the claim and disclosure: a memory allocation system for a computer, said system comprising: a memory pool; a control block, said control block constructed and arranged to contain at least two parameters; one of said parameters for said control block being an address for said memory pool; means for accepting user input parameters, said input parameters being contained in said control block; and means for creating a client network address translation subpool within said memory pool, said means for creating said client NAT subpool including means for allocating addresses within said client NAT address range, means for freeing said addresses in said client NAT address range, and means for deallocating said client NAT address range; wherein said client NAT address range remains allocated within said subpool until all of said addresses with said client NAT address range have been freed.

This is a <u>provisional</u> double patenting rejection since the conflicting claims have not in

fact been patented.

Specification

10.   The disclosure is objected to because it contains an embedded hyperlink and/or other

form of browser-executable code (See page 3, for example). Applicant is required to delete all

embedded hyperlinks and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 102

11.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12.   Claims 1, 9-11, and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by

Mayes et al (U.S. 5,793,763).

a.   Per claim 1, Mayes et al teaches a computer system for a client network address

translation (NAT) pool, said computer system comprising:

- a memory pool (Fig.1; presence of memory mediums imply a collection of memory, hence a memory pool);

- a control block, said control block constructed and arranged to contain at least one parameter, said control block containing an address for said memory pool (col.4 line 55-col.5 line 32, and col.7 lines 8-14; router and process control achieve

functions of control block that contain forwarding parameters along with the ability to forward to the memory of the receiving computer, the act of forwarding implies addressing);

- a pool header for said memory pool, said pool header having a pointer (col.5 lines 56-60; source header suffices for memory pool header which points to by identifying the local IP address); and

- at least one subpool header, said subpool header being pointed to by said pointers of said memory pool, said at least one subpool header having a pointer to a subsequent subpool header, said subpool header further have subpool memory of fixed block storage having at least one fixed block that corresponds to a connection block used for server load balancing and are populated with client NAT addresses (Fig.4B, col.6 line 36-col.7 line 31 and 60-67 along with Applicant's Admitted Prior Art, pg.4 line 13-pg.5 line 8, of applicant's disclosure which teaches the use and function server load balancing devices with an address population);

- wherein an individual said connection block may be either free or allocated, but said client NAT addresses remain allocated in said subpool memory until all of said subpool memory is freed (col.6 lines 9-15; the connection field may be free or stamped which serves the purpose of being free or allocated, furthermore deallocation occurs after a defined time period which could comprise or be based upon the freeing of the subpool memory).

b.   Per claim 9, Mayes et al teaches a system as in claim 1, wherein said control block has an interval list address (col.7 lines 18-31; translation slot has global and local address fields).

c.   Per claim 10, Mayes et al teaches a system as in claim 9, wherein said interval list address has at least one interval list element (col.7 lines 25-31; the global and local address fields are set and reside in the translation slot).

d.   Per claim 11, Mayes et al teaches a system as in claim 10, wherein said interval list element has a pointer to a next interval list element (col.7 lines 20-24; the "next" field holds a pointer to the next translation slot in the translation table).

f.   Claim 19 contains similar limitations to claim 1 and is therefore being rejected

under the same basis.

g.   Claim 20 contains similar limitations to claim 1 and is therefore being rejected

under the same basis.

Claim Rejections - 35 USC § 103

13.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

14.   Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mayes et al in

view of Albert et al (U.S. 6,650,641).

15.   Mayes et al teaches a computer system for a client network address translation (NAT)

pool comprising a memory pool, control block, pool header and pointer, subpool memory, and

connection block; however Mayes et al does not teach a specific subpool header or server load

balancing of the connection block. Nevertheless, Albert et al teaches a service manager with the

ability to provide load balancing while having a pointer to the forwarding agent, a service

message header useful as a subpool header, and incorporating the use of connections populated

with addresses (col.6 line 57-col.8 line 67, col.9 lines 26-65, col.10 lines 14-66, col.11 lines 52-

61, and col.17 lines 6-col.18 line 67).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to provide for server load balancing in a NAT system with the use of a memory, control modules, and connection modules for the purpose of an efficient NAT system implemented with a distributive nature to achieve load balancing and effective allocation schemes. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

Conclusion

16.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

    a.   Brendel et al (U.S. 5,774,660) disclose a world-wide-web server with delayed resource-binding for resource-base load balancing on a distributed resource multi-node network.

    b.   Hamamoto et al (U.S. 6,038,233) disclose a translator for IP networks, a network system using the translator, and an IP network coupling method.

    c.   Colby et al (U.S. 6,006,264) disclose a method and system for directing a flow between a client and a server.

    d.   Fox et al (U.S. 5,636,216) disclose a method for translating internet protocol addresses to other distributed network addressing schemes.

    e.   Srisuresh et al (U.S. 6,058,431) disclose a system and method for network address translation as an external service in the access server of a service provider.

   f. Hossain discloses policy-based network load management in *Bell Labs Technical Journal*, Vol.4 Issue4, p95.

   g. Nishida et al discloses network architecture using network address translation mechanism for network and unidirectional links in *Electronics and Communications in Japan*, Part 1, Vol.83, No.12.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie Shingles whose telephone number is 703-605-4244. The examiner can normally be reached on Monday-Friday 8:30-6:00.

   If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 703-305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

   Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

                     Kristie Shingles
                      Examiner
                      Art Unit 2141

kds

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER